SCIENCE ABSTRACTS.

SECTION A.—PHYSICS.

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ERRATA.

Section A.—PHYSICS.

Abstract No. 54, line 8: *delete* q being a proportionality factor; *insert* a full-stop *after* space.
Abstract No. 55, final line: *insert* significance *after* physical.
Abstract No. 155, line 1: *for* M. Blau, *read* Marietta Blau; line 2, *for* pp. 407–436, *read* pp. 427–436.
Abstract No. 250, line 2: *for* Chouéroun, *read* Choucroun.
Abstract No. 759, line 1: *for* Marz, *read* Marx.
Abstract No. 830, line 2: *for* Parkes, *read* Parks.
Abstract No. 866, lines 11 and 12: *for* and the effect on the solid of the mobile observer, *read* and on the solid the mobile observer.
Abstract No. 884, lines 2, 8, 11 and 15: *for* crystabolite, *read* crystobalite.
Abstract No. 1224, line 2: *for* Öllemann, *read* Allemann.
Abstract No. 1672, line 1: *for* Controids, *read* Centroids.
Abstract No. 1927, line 3: *for* this carbonide, *read* thiocarbamide.
Abstract No. 2215, line 5: *for* terpstra, *read* Terpstra.
Abstract No. 2219, line 9: *for* 121 *read* 171.
Abstract No. 2252, line 2: *for* J. M. B. Dobson, *read* G. M. B. Dobson.
Abstract No. 2305, line 5: *for* coil, *read* cell.
Abstract No. 2348, line 2: *for* Strütt, *read* Strutt.
Abstract No. 2375, line 1: *for* H. G. L. Huxley, *read* L. G. H. Huxley.
Abstract No. 2429, line 1: *for* M. Sborji, *read* U. Sborji.
Abstract No. 2698, last line: *for* 2581 (1927), *read* 2581 (1926).
Abstract No. 2800, line 9: *for* 431 (1926), *read* 1560 (1927).

ACCESSION
No. A1565

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LIST OF JOURNALS

Abbreviation.	Full Title and Publisher.
Acad. Polonaise Sci. et Lettres ...	Bulletin Internationale de l'Académie Polonaise des Sciences et des Lettres. Gebethner et Wolff, Rynek Gl., Cracovie, Poland.
Accad. Lincei, Atti	Atti della Reale Accademia Nazionale dei Lincei. Dott. Giovanni Bardi, Piazza Madama, 19–20, Rome (III), Italy.
Accad. Sci. Torino, Atti	Atti della Reale Accademia delle Scienze dei Torino. Libreria Fratelli Bocca, Via Carlo Alberto 3, Turin, Italy.
A.C.E.C.	Ateliers de Constructions Électriques de Charleroi (Review published by the), Route de Philippeville, Charleroi, Belgium.
AEG Mitt.....	AEG Mitteilungen. Literarisches Büreau der A.E.G., Friedrich-Karl-Ufer 2–4, Berlin N.W. 40, Germany.
AEG Progress	AEG Progress. AEG Machinery and Apparatus Co., Ltd., 131, Victoria Street, Westminster, London, S.W. 1.
Akad. Wiss. Wien, Ber.	Sitzungsberichte der Akademie der Wissenschaften in Wien. Mathematisch-naturwissenschaftliche Klasse. Published by the Akademie, Universitätsplatz, 2, Wien, 1, Austria.
Am. Acad., Proc.	Proceedings of the American Academy of Arts and Sciences. Published by the Academy, 28, Newbury Street, Boston, Mass., U.S.A.
Am. Chem. Soc., J.	The Journal of the American Chemical Society. Published by the Society, Mills Building, Washington, D.C., U.S.A.
Am. Electrochem. Soc., Trans. ...	Transactions of the American Electrochemical Society. Published by the Society, Secretary's Office, Lehigh University, Bethlehem, Pa.
Am. I.E.E., J.	Journal of the American Institute of Electrical Engineers. Published by the Institute, 33, West 39th Street, New York, U.S.A.
Am. Illum. Eng. Soc., Trans.	Transactions of the American Illuminating Engineering Society. Published by the Society, Publication Office, Easton, Pa., U.S.A.
Am. J. Sci.	American Journal of Science. Address: American Journal of Science, New Haven, Conn., U.S.A.
Ann. de Physique	Annales de Physique. Masson et Cie, Libraires de l'Academie de Médecine, 120, Boulevard S. Germain, Paris, VI^{e}.
Ann. d. Physik	Annalen der Physik. J. A. Barth, Salomonstrasse 18B, Leipzig, Germany.
Ann. Soc. Sci. de Bruxelles	Annales de la Société Scientifique de Bruxelles. Published by the Society, 11, Rue des Récollets, Louvain, Belgium.
Annales des Postes, Télé.	Annales des Postes, Télégraphes et Téléphones. Librairie de l'Enseignement Technique, 3, Rue Thénard, Paris (5^{e}).

Abbreviation.	Full Title and Publisher.
Arch. des Sciences	Archives des Sciences Physiques et Naturelles. Institut de Physique de l'Université, Geneva.
Archiv f. Elektrot	Archiv für Elektrotechnik. J. Springer, Linkstrasse, 23–24, Berlin, W. 9, Germany.
Arkiv f. Kem. Min. o. Geologie, Stockholm	Arkiv für Kemi, Mineralogi och Geologie, Stockholm. Published by the Academie Royale des Sciences, Stockholm 50, Sweden.
Arkiv f. Mat., Astron. och Fysik, Stockholm	Arkiv für Matematik, Astronomi och Fysik, Stockholm. Published by the Academie Royale des Sciences, Stockholm 50, Sweden.
A.S.E.A., J.	Allmanna Svenska Elektriska A.B. Publicity Department, ASEA, Vesteras, Sweden.
Assoc. Ing. El. Liége, Bull.	Bulletin de l'Association des Ingénieurs Électriciens sortis de l'Institut Électrotechnique Montefiore, 31, Rue Saint-Gilles, Liége, Belgium.
Astron. Iakttagelser Undersökning., Stockholm	Astronomiska Iakttagelser och Undersökningar å Stockholms Observatorium. Published by the Académie Royale des Sciences, Stockholm 50, Sweden.
Astron. J.	The Astronomical Journal. Published by the Dudley Observatory, Albany, N.Y., U.S.A.
Astrophys. J.	The Astrophysical Journal. The University of Chicago Press, Chicago, Illinois, U.S.A.
Automotor J.	The Automotor Journal. 36, Great Queen Street, London, W.C. 2.
Bell System Techn. J.	Bell System Technical Journal. Information Department, American Telephone and Telegraph Co., 195, Broadway, New York, U.S.A.
Brit. J. of Radiology	British Journal of Radiology. Percy Lund, Humphries & Co., Ltd., 3, Amen Corner, E.C.
Brown Boveri Rev.	The Brown Boveri Review. British Brown Boveri, Ltd., Trafalgar House, Waterloo Place, London, S.W. 1.
Bull. Astronomique	Bulletin Astronomique. Gauthier-Villars et Cie, 55, Quai des Grands-Augustins, Paris.
Bull. Oerlikon	Bulletin Oerlikon. Published by Oerlikon, Ltd., 28–31, Essex Street, Strand, London, W.C. 2.
Bureau of Mines, Techn. or Sci. Papers	Technical or Scientific Papers of the Bureau of Mines, U.S. Department of Commerce. Superintendent of Documents, Government Printing Office, Washington, U.S.A.
Bureau of Standards, Sci. or Technol. Papers	Scientific or Technologic Papers of the Bureau of Standards. Government Printing Office, Washington, U.S.A.
Calcutta Math. Soc., Bull.	Bulletin of the Calcutta Mathematical Society, Calcutta University Press, Senate House, Calcutta. Bowes & Bowes, 1, Trinity Street, Cambridge.
Cambridge Phil. Soc., Proc.	Proceedings of the Cambridge Philosophical Society. Deighton Bell & Co., Ltd., and Bowes & Bowes, Cambridge, and Cambridge University Press, Fetter Lane, London, E.C. 4.
Cambridge Phil. Soc., Trans.	Transactions of the Cambridge Philosophical Society. Deighton Bell & Co., Ltd., and Bowes & Bowes, Cambridge, and Cambridge University Press, Fetter Lane, London, E.C. 4.
Canad. Elect. News	Electrical News, Toronto. Hugh C. MacLean Publications, Ltd., 347, Adelaide Street West, Toronto 2, Canada.
Chem. and Met. Eng.	Chemical and Metallurgical Engineering. McGraw Hill Publishing Co., Inc., Tenth Avenue at 36th Street, New York, U.S.A.

Abbreviation.	Full Title and Publisher.
Chem. Soc., J.	Journal of the Chemical Society. Gurney & Jackson, 33, Paternoster Row, London, E.C. 4.
Chem. Soc. Japan, Bull.	Bulletin of the Chemical Society of Japan. Published by the Society, c/o Faculty of Science, Imperial University of Tokyo, Japan.
Colliery Guardian	The Colliery Guardian. 30 and 31, Furnival Street, Holborn, London, E.C. 4.
Comptes Rendus	Comptes Rendus Hebdomadaires des Séances de l'Académie des Sciences. Gauthier-Villars et Cie, 55, Quai des Grands Augustins, Paris.
Elect. Communication	Electrical Communication. International Standard Electrical Corporation, 41, Broad Street, New York, U.S.A., and Connaught House, Aldwych, London, W.C. 2.
Elect. J.	The Electric Journal. Published by the Westinghouse Club, 1205, Keenan Building, Pittsburgh, Pa., U.S.A.
El. Rev.	The Electrical Review. 4, Ludgate Hill, London, E.C. 4.
El. Rly. and Tramway J.	The Electric Railway and Tramway Journal. 37 and 38, Strand, London, W.C. 2.
El. Times	The Electrical Times. Sardinia House, Kingsway, London, W.C. 2.
El. World	Electrical World. McGraw Hill Publishing Co., Inc., Tenth Avenue at 36th Street, New York, U.S.A.
Electrician	The Electrician. Bouverie House, Fleet Street, London, E.C. 4.
Electrot. Laborat. Tokyo, Japan, Circ.	Circulars of the Electrotechnical Laboratory, Tokyo, Japan.
Electrot. Laborat. Tokyo, Japan, Researches.	Researches of the Electrotechnical Laboratory.
Elek. Betrieb	REA Der Elektrische Betrieb. Georg Siemens, Kurfürstenstrasse 8, Berlin, W. 57.
Elek. Nachrichten	Elektrische Nachrichten-technik. Dr. K. W. Wagner, Güntzelstrasse 9, Wilmersdorf, Berlin.
Elek. u. Maschinenbau.	Elektrotechnik und Maschinenbau, Theobaldgasse 12, Wien 6, Austria.
Elekt. Zeits.	Elektrotechnische Zeitschrift. Published by J. Springer, Linkstrasse 23–24, Berlin, W. 9.
Elettrotecnica	L'Elettrotecnica. Giornale ed Atti dell' Associazione Elettrotecnica Italiano. Publishedby the Society, Via Annunciata, 4, Milan, Italy.
Engineer	The Engineer. 33, Norfolk Street, Strand, London, W.C. 2.
Engineering	Engineering, 35 and 36, Bedford Street, Strand, London, W.C. 2.
Experimental Wireless	Experimental Wireless and the Wireless Engineer. Iliffe & Sons, Ltd., Dorset House, Tudor Street, London, E.C. 4.
Faculty of Sci. Tokyo, J.	Journal of the Faculty of Science, Tokyo. Maruzen Co., Ltd., 11–16, Nihonbashi Tori-Sanchome, Tokyo, Japan.
Faraday Soc., Trans.	Transactions of the Faraday Society. Gurney & Jackson, 33, Paternoster Row, London.
Frank. Inst., J.	Journal of the Franklin Institute. Published by the Franklin Institute of the State of Pennsylvania, Philadelphia, U.S.A.
Gen. El. Rev.	General Electric Review. Published by the General Electric Co., Schenectady, New York, U.S.A.
Geofysiske Publ.	Geofysiske Publikasjoner. Direktor Th. Hesselberg. Det Norske Meteorologiske Institutt, Oslo, Norway.

Abbreviation.	Full Title and Publisher.
Harvard Coll. Obs., Bull.	Bulletin of the Harvard College Observatory. Published by the Academy, Cambridge, Mass., U.S.A.
Harvard Coll. Obs., Circ.	Circular of the Harvard College Observatory. Published by the Academy, Cambridge, Mass., U.S.A.
Illum. Eng., London	The Illuminating Engineer. The Journal of Good Lighting. 32, Victoria Street, London, S.W. 1.
Imp. Acad. Tokyo, Proc.	Proceedings of the Imperial Academy of Tokyo. Office of the Academy, Ueno Park, Tokyo, Japan.
Indian Journ. Phys.	Indian Journal of Physics and Proceedings of the Indian Association for the Cultivation of Science. Published by the Association, 210, Bow-Bazaar Street, Calcutta.
Indust. and Engin. Chem.	Industrial and Engineering Chemistry. Published by the American Chemical Society, 1709, G Street, N.W., Washington, D.C., U.S.A.
Inst. Civ. Eng., Proc.	Proceedings of the Institution of Civil Engineers. Published by the Institution, Great George Street, Westminster, S.W. 1.
Inst. El. Eng., J.	Journal of the Institution of Electrical Engineers. Published by the Institution, Savoy Place, Victoria Embankment, London, W.C. 2.
Inst. El. Eng. of Japan, J.	The Journal of the Institute of Electrical Engineers of Japan. Denki-Gakkwai, No. 5, 1-Chôme, Yûraku-chô Kôjimachi-ku, Tokyo, Japan.
Inst. El. Eng. of Japan, Selected Papers	Selected Papers of the Institute of Electrical Engineers of Japan. Published by the Institute, No. 21, Mitsubishi Building, Marunouchi, Tokyo, Japan.
Inst. Eng. and Shipbuilders, Trans.	Transactions of the Institution of Engineers and Shipbuilders in Scotland. Published by the Institution, Elmbank Crescent, Glasgow, N.B.
Inst. Mech. Eng., Proc.	The Proceedings of the Institution of Mechanical Engineers. Storey's Gate, St. James's Park, London, S.W. 1.
Inst. Naval Architects, Trans.	Transactions of the Institution of Naval Architects. Published by the Institution, 5, Adelphi Terrace, London, W.C. 2.
Inst. of Metals, J.	Journal of the Institute of Metals. Published by the Institute, 36, Victoria Street, London, S.W. 1.
Inst. Phys. and Chem. Research, Tokyo, Sci. Papers	Scientific Papers of the Institute of Physical and Chemical Research. Iwanami Shoten, 16, Minamijimbocho, Kandaku, Tokyo, Japan.
Inst. Radio Eng., Proc.	Proceedings of the Institute of Radio Engineers. Published by the Institute, 450–454, Ahnaip Street, Menasha, Wis., U.S.A.
Iron and Steel Inst., J.	Journal of the Iron and Steel Institute. Published by the Institute, 28, Victoria Street, London, S.W. 1.
J. Math. Phys., Mass. Inst. of Technology	Journal of Mathematics and Physics, Massachusetts Institute of Technology. Published by the Institute, Mass., U.S.A.
J. de Physique et le Radium	Le Journal de Physique et le Radium. Published by the Société Française de Physique, 12, Place de Laborde, Paris.
J. Phys. Chem.	Journal of Physical Chemistry. The Publishers, Baker Laboratory, Ithaca, New York.

Abbreviation.	Full Title and Publisher.
Journ. Sci. Instruments	Journal of Scientific Instruments. Published by the Cambridge University Press, Fetter Lane, London, E.C. 4.
Journ. Télégraph	Journal Télégraphique. Published by the Bureau International de l'Union Télégraphique, Berne, Switzerland.
K. Akad. Amsterdam, Proc.	Proceedings of the Koninklijke Akademie van Wetenschappen te Amsterdam. Published by the Academy, Amsterdam, Holland.
Kolloid Zeits.	Kolloid Zeitschrift. Theodor Steinkopff, Residenzstr, 32, Dresden-Blasewitz, Germany.
Kyoto Coll. Eng., Mem.	Memoirs of the Kyoto Imperial University College of Engineering. Maruzen Co., Ltd., Kyoto, Japan.
Kyoto Coll. Sci., Mem.	Memoirs of the College of Science, Kyoto Imperial University. Maruzen Co., Ltd., Kyoto, Japan.
Kyushu Univ. Coll. Eng., Mem.	Memoirs of the College of Engineering, Kyushu Imperial University. Published by the University, Fukuoka, Japan.
Leeds Philosoph. and Lit. Soc., Proc.	Proceedings of the Leeds Philosophical and Literary Society. Chorley and Pickersgill, Ltd., Leeds.
Manchester Phil. Soc., Mem.	Memoirs and Proceedings of the Manchester Literary and Philosophical Society. Published by the Society, 36, George Street, Manchester.
Mechanical Engineering	Mechanical Engineering. Published by the American Society of Mechanical Engineers, 20th and Northampton Streets, Easton, Pa., U.S.A.
Meteorolog. Office, Prof. Notes and Geophys., Mem.	Professional Notes and Geophysical Memoirs of the Meteorological Office. H.M. Stationery Office, Adastral House, Kingsway, London, W.C. 2.
Monthly Weather Rev.	Monthly Weather Review. Published by the U.S. Department of Agriculture. Chief, U.S. Weather Bureau, Washington, D.C., U.S.A.
Nat. Acad. Sci., Proc.	Proceedings of the National Academy of Sciences. Published by the Academy, B and 21st Streets, Washington, D.C., U.S.A.
Nature	Nature. MacMillan & Co., Ltd., St. Martin's Street, London, W.C. 2.
New Zealand J. of Sci.	The New Zealand Journal of Science and Technology. W. A. G. Skinner, Government Printer, Wellington, New Zealand.
N. Cimento	Nuovo Cimento. N. Zanichelli, R. Istituto di Fisica, Bologna, Italy.
Observatory	The Observatory. Taylor & Francis, Red Lion Court, Fleet Street, E.C. 4.
Onde Élec.	L'Onde Électrique. Publication de la Société des Amis de la T.S.F., 40, Rue de Seine, Paris.
Optical Soc., Trans.	Transactions of the Optical Society. Published by the Society, 1, Lowther Gardens, Exhibition Road, S. Kensington, London, S.W. 7.
Optical Soc. America, J. and Rev. Sci. Inst.	Journal of the Optical Society of America and Review of Scientific Instruments. George Banta Publishing Co., 450–454, Ahnaip Street, Menasha, Wisconsin, U.S.A.
Phil. Mag.	The London, Edinburgh and Dublin Philosophical Magazine and Journal of Science, Messrs. Taylor & Francis, Red Lion Court, Fleet Street, London.

Abbreviation.	Full Title and Publisher
Phot. J.	The Photographic Journal. 35, Russell Square, London, W.C. 1.
Phys. Math. Soc. Japan, Proc.	Proceedings of the Physico-Mathematical Society of Japan. Published by the Society, Faculty of Science, Tokyo Imperial University, Japan.
Phys. Rev.	The Physical Review. The Publishers, 1500, University Avenue, S.E., Minneapolis, U.S.A.
Phys. Soc., Proc.	Proceedings of the Physical Society of London. Fleetway Press, Ltd., 3–9, Dane Street, High Holborn, London, W.C. 1.
Phys. Zeits.	Physikalische Zeitschrift. S. Hirzel, Leipsig, C. 1., Germany.
Post Office Elect. Eng., J.	The Post Office Electrical Engineers' Journal. Published by the Electrical Review, Ltd., 4, Ludgate Hill, London, E.C. 4.
Power	Power. McGraw Hill Publishing Co., Inc., Tenth Avenue at 36th Street, New York, U.S.A.
Preuss. Akad. Wiss. Berlin, Ber.	Sitzungsberichte der Preussischen Akademie der Wissenschaften zu Berlin. Published by the Academy, 38 Unter den Linden, Berlin.
Q.S.T. Français et Radioélectricité	Q.S.T. Français et Radioélectricité. 53, Rue Réaumur, Paris, 2e.
Rev. de Mét.	Revue de Métallurgie. 5, Cité Pigalle, Paris.
Rev. d'Optique	Revue d'Optique Théorique et Instrumentale. Imprimerie Berger-Levrault, 18, Rue des Glacis, Nancy, France.
Rev. Gén. d'Él.	Revue Générale de l'Électricité. 12, Place de Laborde, Paris.
Roy. Astron. Soc. Canada, J.	Journal of the Royal Astronomical Society of Canada. Published by the Society, 198, College Street, Toronto, Canada.
Roy. Astron. Soc., M.N.	Monthly Notices of the Royal Astronomical Society. Published by the Society, Burlington House, London, W. 1. Sold by Wheldon & Wesley, Ltd., 2, 3 and 4, Arthur Street, New Oxford Street, London, W.C. 2.
Roy. Dublin Soc., Proc.	The Scientific Proceedings of the Royal Dublin Society. Published by the Society, Ballsbridge, Dublin.
Roy. Inst., Proc.	Proceedings of the Royal Institution of Great Britain. Published by the Institution, 21, Albemarle Street, London, W. 1.
Roy. Irish Acad., Proc.	Proceedings of the Royal Irish Academy. Hodges, Figgis & Co., Dublin.
Roy. Meteorolog. Soc., J.	Quarterly Journal of the Royal Meteorological Society. Edward Stanford, Ltd., 12, 13 and 14, Long Acre, London, W.C. 2.
Roy. Meteorolog. Soc., Mem.	Memoirs of the Royal Meteorological Society. Edward Stanford, Ltd., 12, 13 and 14, Long Acre, London, W.C. 2.
Roy. Soc. Arts, J.	Journal of the Royal Society of Arts. G. Bell & Sons, Ltd., York House, Portugal Street, London, W.C. 2.
Roy. Soc. Canada, Trans.	Transactions of the Royal Society of Canada. James Hope & Son, Ottawa, Canada.
Roy. Soc. Edinburgh, Proc.	Proceedings of the Royal Society of Edinburgh. Robert Grant & Son, 126, Princes Street, Edinburgh.
Roy. Soc., Phil. Trans.	Philosophical Transactions of the Royal Society of London. Harrison & Sons, Ltd., 44–47, St. Martin's Lane, London, W.C. 2.
Roy. Soc., Proc.	Proceedings of the Royal Society of London. Harrison & Sons, Ltd., 44–47, St. Martin's Lane, London, W.C. 2.

Abbreviation.	Full Title and Publisher.
Roy. Soc. Victoria, Proc.	Proceedings of the Royal Society of Victoria. Ford & Son, Drummond Street, Carlton, Melbourne, Australia.
S. African Inst. El. Eng., Trans. ..	The Transactions of the South African Institute of Electrical Engineers. Published by the Institute, P.O. Box 5907, Johannesburg, S. Africa.
Schweiz. Elektrot. Verein, Bull. ..	Bulletin des Schweizerischen Elektrotechnischen Vereins. Association Suisse des Electriciens, Seefeldstrasse 301, Zürich 8, Switzerland.
Science	Science. Official organ of the American Association for the Advancement of Science. The Science Press, Grand Central Terminal, New York, U.S.A.
Sci. Assoc. Maharajah's Coll., Vizianagaram, J.	The Journal of the Science Association, Maharajah's College, Vizianagaram. Methodist Publishing House, Madras, India.
Soc. Belge Élect., Bull.	Bulletin de la Société Belge des Électriciens. Librairie Ramlot Frères et Sœur, 25, Rue Orétry, Brussels, Belgium.
Soc. Franç Élect., Bull.	Bulletin de la Société Française des Électriciens. 14, Rue de Staël, Paris.
Teleg. u. Fernspr. Techn.	Telegraphen und Fernsprech Technik. R. Dietze, Regensburgerstrasse, 12A, Berlin W. 50, Germany.
Terrest. Magn.	Terrestrial Magnetism and Atmospheric Electricity. The Caxton Press, 420, Plum Street, Cincinnati, Ohio, U.S.A. Wheldon & Wesley, Ltd., 2, 3 and 4, Arthur Street, London, W.C. 2.
Tijds. Nederland. Radiogenootschap	Tijdschrift van het Nederlandsch Radiogenootschap, Amsterdam. The Secretary, Willem Barentzstraat 8, Utrecht, Holland.
Tohoku Math. J.	The Tohoku Mathematical Journal. Tohoku Imperial University, Sendai, Japan.
Tohoku Univ., Sci. or Technol. Reports	Scientific or Technology Reports of the Tohoku Imperial University. Maruzen Co., Ltd., Tokyo and Sendai, Japan.
Tokyo Univ. Aeronaut Research Inst., Report	Report of the Aeronautical Research Institute, Tokyo Imperial University. Published by the University, Hukagawa, Tokyo, Japan.
Tokyo Univ. Earthquake Research Inst., Bull.	Bulletin of the Earthquake Research Institute, Tokyo Imperial University. Director of the Earthquake Research Institute, Tokyo Imperial University, Japan.
Union Obs. S. Africa, Circ.	Circular of the Union Observatory of S. Africa.
Univ. Nac. La Plata, Estudio Ciencias	Universidad Nacionale de La Plata. Contribucion al Estudio de las Ciencias. Published by the University, La Plata, Argentine.
Univ. of Illinois Eng. Exp. Sta., Bull.	Bulletin of the Engineering Experiment Station of the University of Illinois. Published by the University, Urbana, Illinois, U.S.A.
Washington Acad. Sci., J.	Journal of the Washington Academy of Sciences. Published by the Academy, Mt. Royal and Guilford Aves., Baltimore, Maryland, U.S.A.
Wireless World and Radio Rev. ..	Wireless World and Radio Review. The Publishers, Dorset House, Tudor Street, London, E.C. 4.
World Power	World Power. 62, Lincoln's Inn Fields, London, W.C. 2.
Zeits. Elektrochem.	Zeitschrift für Elektrochemie und angewandte physikalische Chemie. Dr. E. Müller, Josefstrasse 4, Dresden 20, Germany.

Abbreviation.	Full Title and Publisher.
Zeits. f. Hochfrequenztechn.	Jahrbuch der Drahtlosen Telegraphie und Telephonie. Zeitschrift für Hochfrequenztechnik. M. Krayn, Genthiner Strasse 39, Berlin W. 10, Germany.
Zeits. f. Metallkunde	Zeitschrift für Metallkunde. V.DI-Verlag, G.m.b.H, Dorotheenstrasse 40, Berlin, N.W. 7, Germany.
Zeits. f. Physik	Zeitschrift für Physik. J. Springer, Linkstrasse 23/24, Berlin, W. 9, Germany.
Zeits. Instrumentenk.	Zeitschrift für Instrumentenkunde. J. Springer, Linkstrasse 23/24, Berlin, W. 9, Germany.
Zeits. Math. u. Mechanik	Zeitschrift für angewandte Mathematik und Mechanik. Verlag des Vereines Deutscher Ingenieure, Beuthstrasse 7, Berlin, S.W. 19, Germany.
Zeits. phys. Chem.	Zeitschrift für physikalische Chemie. Akademische Verlagsgesellschaft M.B.H. Leipzig, Germany.
Zeits. techn. Physik	Zeitschrift für technische Physik. J. A. Barth, Salomonstrasse, 18B Leipzig, Germany.
Zeits. Vereines deutsch. Ing.	Zeitschrift des Vereines Deutscher Ingenieure. Dorotheenstrasse 40, Berlin, N.W.7, Germany.
Zeits. Wiss. Phot.	Zeitschrift für wissenschaftliche Photographie, Photophysik und Photochemie. J. A. Barth, Salomonstrasse 18B, Leipzig, Germany.